

## **Education Decentralization and Accountability Relationships in Latin America**

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## **Abstract**

This paper aims at analyzing decentralization reforms in the education sector in Latin America (their status, impact and on-going challenges) by making use of the accountability framework developed by the 2004 World Development Report. It starts by identifying three main groups of models according to the sub-national actors involved, the pattern adopted in the distribution of functions across sub-national actors and the accountability system central to the model. It then reviews the impact of these models, according to the available empirical evidence, and explores determinants of this impact, extracting lessons useful to the design of future reforms. It concludes that the single most important factor in ensuring the success or failure of a reform is the way the accountability relationships are set to work within each of the models and provides some lessons on how to get these relationships to work effectively. It also provides three main general lessons for the selection of “successful” models: (a) avoiding complicated models; (b) increasing school autonomy and the scope for “client power”, maintaining a clear role for the other accountability relationships; and (c) putting more emphasis on the “management” accountability relationship and the sustainability of the models.

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# **Education Decentralization and Accountability Relationships in Latin America**

## **Introduction**

This paper aims at analyzing decentralization reforms in the education sector in Latin America (their status, impact and on-going challenges), by making use of the accountability framework recently developed by the 2004 World Development Report (WDR). This framework focuses on accountability mechanisms between policy-makers, providers and citizens/clients to explain why service delivery works or fails. In the first section, the paper provides a characterization of alternative decentralization reforms. It then reviews the impact of these reforms and explores determinants of this impact, very much related to the implementation and use of the accountability mechanisms, extracting lessons which should be useful to the design of future reforms.

It is generally assumed that services will be provided more efficiently by sub-national units because they have a better knowledge of local conditions, characteristics and preferences than the central actor (asymmetric information argument<sup>1</sup>). Adopting a principal and agent terminology, it is clear, however, that decentralizing decision making autonomy will not by itself be enough to ensure better provision if the new agent is not given the incentive to use its superior information to provide a better service. This is where the accountability dimension comes in. A decentralized framework of service delivery will work only if the agent is made accountable for its actions to the central actor, which decided to decentralize (and which we could see as principal number one) and to the community, which is the ultimate beneficiary of the services (and can be seen as principal number two or client)<sup>2</sup>.

Following the WDR, we detect four main types of accountability relationships:

- (a) the “compact” relationship, defined as the broad, long-term relationship of accountability connecting policymakers to organizational providers;
- (b) the “voice” relationship, defined as the complex accountability relationship which connects citizens and politicians;
- (c) the “client power” relationship defined as the relationship of accountability connecting clients to the frontline service providers, usually at the point of service delivery;
- (d) and the “management” relationship, defined as the relationship connecting organizational providers and frontline professionals.

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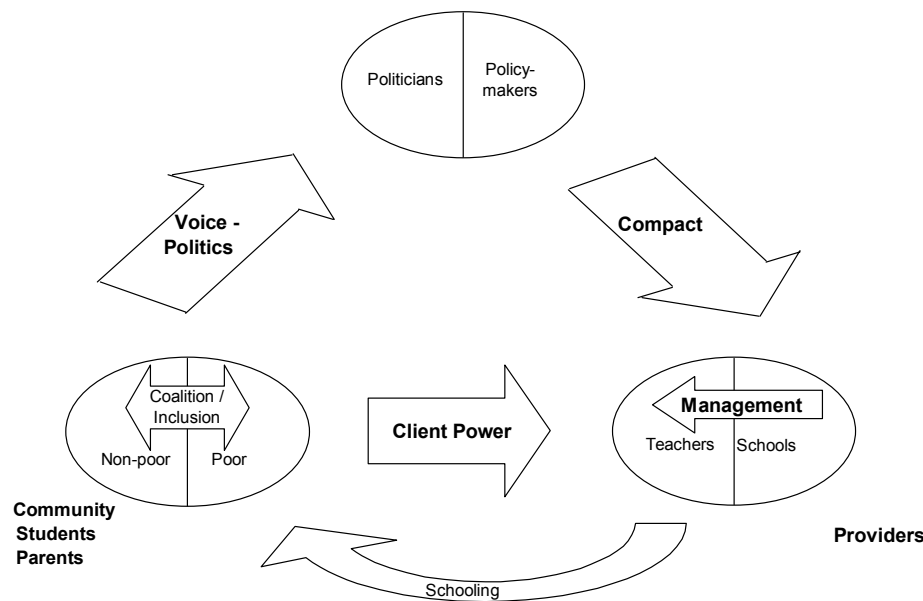
<sup>1</sup> This argument is, for instance, highlighted in Ugaz (1997) who considers “the improvement in the flow of information” to be the first channel through which decentralization can improve the quality of the services. It is also developed by Wossmann (2000) and Klugman (1994, 1997).

<sup>2</sup> The opportunity that decentralization provides to enhance this second accountability relationship is often seen as another major argument for decentralization. As Wolman (1988) mentions: “Decentralization fosters greater responsiveness of the decision-makers to the will and needs of the citizens because they are more knowledgeable about and attuned to the needs of their area than are centralized decision makers and because decentralization permits these decision-makers to be held directly accountable to the local citizens (through local elections or other means)”.

These accountability relationships can in turn be grouped under the “long route” to accountability or the “short route” one. Through the “long route”, clients as citizens (or community) influence policy-makers and policy-makers, in turn, influence providers (i.e. both the “compact” and “voice” relationships are part of the “long route”). Through the “short route”, citizens, acting as final users/clients of the service, influence more directly the providers (this is the “client power” relationship).

Figure 1 illustrates this accountability framework. When the policy-makers do not respond to the citizens, and neither them nor the final users of the services can exert control over the providers, service delivery is very likely to fail.

**Figure 1: The framework of accountability relationships, according to the WDR**



## Section I: Status of the Decentralization Process in Education in LAC

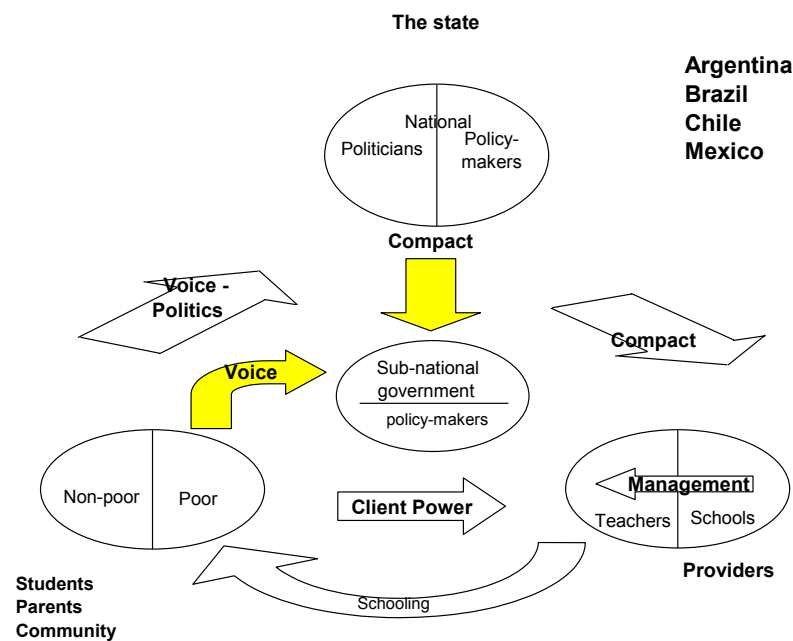
Latin America presents a variety of experiences in the decentralization of education. Practically all countries have undertaken some form of decentralization of their education system which involved the transfer of decision making autonomy to actors within (“deconcentrated” bodies) or, more likely, outside (intermediate or local governments, schools, etc) the ministry of education’s bureaucratic structure, with the main purpose of delivering the service more efficiently. This variety of models are centered on different accountability relationships.

It is very difficult to categorize all the different existing models, but, simplifying substantially, we can detect three main groups of models according to the sub-national actors involved, the pattern adopted in the distribution of functions across sub-national actors and the accountability system central to the model. These three groups of models are illustrated below in Figures 2, 3 and 4 (where the most important accountability

relationships for each model have been shadowed). Only the most representative countries for each of the groups are mentioned. Some countries whose education sectors are still highly centralized (like Uruguay, Paraguay, Costa Rica) would not be part of any of these typologies, while others whose decentralization efforts are incipient would start falling under one of the three categories. It is worth reviewing briefly the main characteristics of each of the groups.

### A. Three Main Groups of Models

**Figure 2: the “sub-national government” model**



#### The “sub-national government” model

A first type of model implemented in LAC, and illustrated in Figure 2, places an intermediate political actor at the center of the decentralization process. This is the case of Argentina which decentralized all education delivery functions to the provincial level (in two main stages, 1978 and 1992), Mexico which did the same to the state level

(gradually from 1992), Brazil where education delivery is provided by both the states and the municipalities, since 1930, but where the role of municipalities was increased with the Constitution of 1988 and, above all, the recent 1996 financing reform<sup>3</sup>, and Chile which transferred service delivery to the municipal level (gradually from 1981). Brazil is included in this type of models because, even if there are two political actors which have the responsibility of education delivery, the state and the municipality, the education delivery systems that have developed around each of these actors are to a large extent independent one from another (parallel systems), also within the same state, allowing us to identify the working of each of them with Figure 2.

A simplification is being made in putting together all these countries because it is clear that the decentralization processes of each of them was to a large extent different. In particular, some countries like Argentina and Brazil have transferred many more

<sup>3</sup> In 1996, there was a particularly innovatory reform which introduced a new financing mechanism (the so-called FUNDEF) which collects resources from state and municipal governments in a single fund and re-distributes them to the state and municipal systems according to the amount of students enrolled in each system to address the divergence between resource needs and availability.

responsibilities to the sub-national level (virtually all responsibilities on the administration of personnel and non-personnel costs, extensive responsibilities in financing and some responsibilities in planning the educational process and setting-up curricula) than Chile and Mexico, which have maintained fairly centralized personnel and financing policies. In any case, the driving force in this type of models is often the center (at least in the cases of Chile and Argentina in 1978) which decentralizes the main responsibility for the delivery of the service to an intermediate political actor which becomes the center of the decentralization process and around which a specific set of accountability relationships needs to be built. Central to the working of this model are two main accountability relationships: the “compact” relationship between the center and the regional/local political actor and the “voice” relationship between the citizens and the regional/local political actor<sup>4</sup>.

In fact, the relative importance or importance *tout-court* of these two relationships varies across countries and time, becoming, as we will see, an important determinant of the results of the reform. In Argentina and Brazil, for instance, the “compact” relationship between the center and the provinces, states or municipalities has been traditionally maintained very flexible, with little or no specification of national and sub-national responsibilities, targets and objectives (and this in spite of the two recent Education Laws that were approved in both countries<sup>5</sup>) and the use of general transfers which are not tied to any particular efficiency indicator (this is still the case in Argentina and was the case in Brazil up to 1996). At least since the democratic election of the provincial governors in Argentina in 1983 and the one of the state governors and mayors in Brazil in, respectively, 1982 and 1985, both models have tended to rely more on the “voice” of the citizens inside each of the provinces, states or municipalities to produce a quality output.

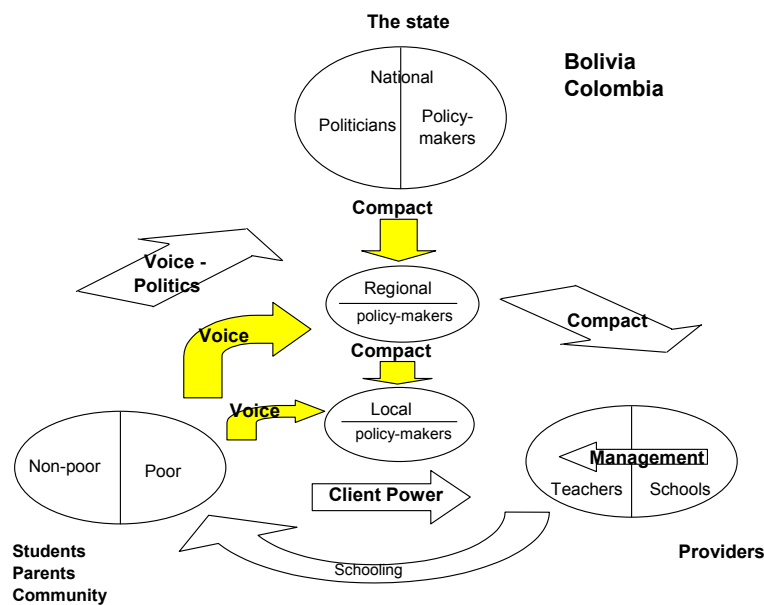
On the other hand, in Chile, since the beginning the responsibility for the delivery of education was transferred to the municipalities through specific agreements that defined explicitly the responsibilities, rights and obligations of the new providers and there was a clear attempt to reward municipal performance by tying central resources to the number of students attending class (implementation of a “quasi-voucher” system), while “voice” was only developed much later since mayors have been elected only since 1992 (11 years after the start of the reform). As we will see, Chile is a somewhat more complex model where also another accountability relationship (the “client power” one) was directly developed within the same “municipalization” process by introducing a public subsidy also for private schools.

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<sup>4</sup> The “compact” relationship would ensure that the services are produced efficiently and in accordance with national objectives while the “voice” relationship would help ensure efficiency, through monitoring of local authorities, and the fine-tuning of the objectives to the local reality.

<sup>5</sup> The “*Ley Federal de Educacion*” in 1994 in Argentina and the “*Lei de Diretrizes e Bases da Educacao Nacional*” (LDB) in 1996 in Brazil. The first law was approved only about 14 years after the first wave of decentralization and, while it did specify the relative responsibilities of the federal government and the provinces in education, it did not quite provide the instruments for the center to change provincial behaviours. The second law, while it laid out roles and responsibilities of the various levels, assigned a joint responsibility in primary to the state and municipal level, which is currently open to many interpretations.

**Figure 3: the “sub-national shared responsibility” model**



### The “sub-national shared responsibility” model

A second type of model, illustrated in Figure 3, can be well exemplified by the cases of Colombia (up to 2001/2002) and Bolivia. Colombia gave a clear impulse to the decentralization of education in 1986 by encouraging a “municipalization” process of service delivery followed by another clear signal in 1991, with the new

Constitution, giving more emphasis to regional elected levels (“departments”). Bolivia started its own decentralization process in 1994 and 1995, with, respectively, the “Popular Participation Law” (*“Ley de Participacion Popular”*) and the “Administrative Decentralization Law” (*“Ley de Descentralizacion Administrativa”*), which led to the transfer of education services to municipalities and, more gradually, to “departments”.

The peculiar common feature of these models, which have generally been the product of more extensive country consultation (i.e. less center driven), is that they put two different political actors at the center of the decentralization process and distribute the main responsibility for service delivery among them in a complementary way<sup>6</sup>. As the three levels, the central, the regional and the local, are organized hierarchically and are seen as having mostly a complementary role in service delivery, this type of model, which should have the merit of taking advantage of the skills and specificities of each level, is highly dependent on the “compact” relationship between the center and the regional level, on the one hand, and the regional level and the local level, on the other; as well as on the “voice” relationship between citizens and the local level, on the one hand, and citizens and the regional level on the other.

As above, the relative weight of these relationships varies between the two countries. Colombia, for instance, put emphasis on all four relationships (both the departmental and municipal governments are elected), with particular emphasis, however, on the “compact” relationships. In particular, the country put in place an original accreditation

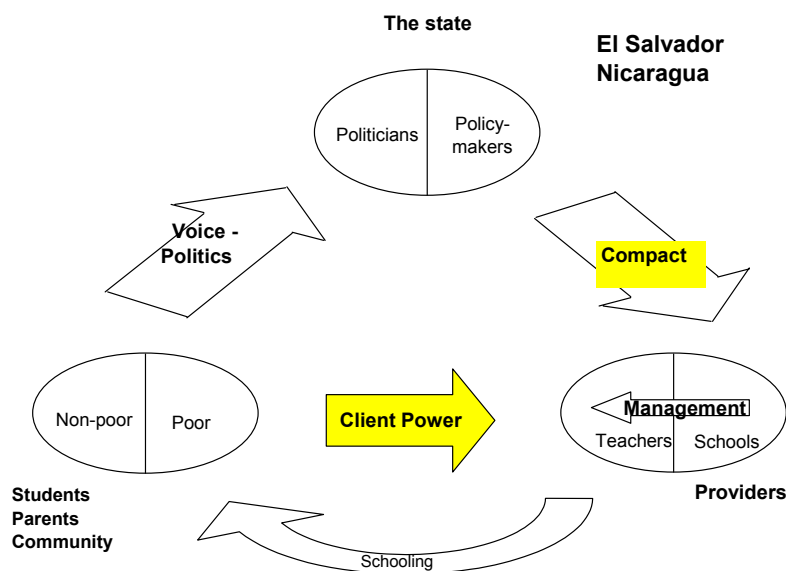
<sup>6</sup> More specifically, in the case of both countries, the management of human resources was attributed primarily to the departmental level and the management of school infrastructure primarily to the municipal level, with the responsibility for the planning, pedagogical and curricular aspects of the educational process shared mostly across the central/regional/local level.



process (“*proceso de certificacion*”) through which the departments would be authorized by the center to manage all human resources and the funds that go with this responsibility (the so-called “*Situado Fiscal*”) only after they have fulfilled a number of pre-conditions, including the establishment of an adequate institutional setting, development plan and information system; and the same accreditation process was put in place for municipalities larger than 100,000 habitants that, under a similar set of conditions, could in turn be authorized by the departments to go beyond the management of school infrastructure and also manage directly their human resources and related funds. The structure of transfers put in place across levels would also tie the resources to several indicators, including measures of fiscal effort, in an attempt to induce efficiency in the use of funds.

In Bolivia, particular emphasis was put on the “voice” relationship between citizens and the local governments: in 1994 all the local governments were elected and local associations (“*juntas distritales*”) were set up everywhere, with an important role in the identification of school needs and the monitoring and evaluation of the educational process. The role of the “compact” relationship is less clear: in particular the role of the departments was still not fully established in 2002.

**Figure 4: the “school autonomization” model**



#### The “school autonomization” model

A third type of model, illustrated in Figure 4, is well illustrated by the countries of Nicaragua and El Salvador in Central America (but other Central American countries are

tending in the same direction, like Honduras and Guatemala, and a state like Minas Gerais in Brazil would also fall under this category). In 1990, borrowing on community school management models developed during the civil war, El Salvador launched the EDUCO program, aimed at promoting a model of school autonomy with extensive community participation in the rural areas. Several features of the EDUCO model would then be applied to traditional schools. In 1993, the Government of Nicaragua also started to implement a process of school autonomy with community participation (“*centros autonomos*”), which, in 1996, already covered more than 400 primary and secondary

schools and, in 1998, was covering 81% of the secondary school age students and almost half of the primary students. In both countries, “school autonomization” consisted in a transfer of broad administrative responsibilities (teacher management, school maintenance, etc) and to, a much lesser extent, some pedagogical responsibilities to schools.

These two models started after a civil war and, therefore, were also part of a pacification and democratization attempt, and were initially implemented on a sub-national scale to be then, to different extents, extended. Their main characterizing feature is that, in contrast, to the other ones, they put the school at the center of the decentralization process and, therefore, central to their functioning are the two following accountability relationships: the “compact” relationship between the center and the school and the “client power” relationship between the service users or community and the school.

In both countries, these two relationships have been substantially developed, with particular emphasis on the second one. In both countries, each school is required to establish an elected council, composed only of parents in EDUCO<sup>7</sup> and of parents, teachers and the school director in the “*centros autonomos*”<sup>8</sup>, and to sign a special agreement (or “*convenio*”) with the Ministry of Education which would decentralize to the councils the management of all funds, allowing them to manage all teachers, take care of operating and maintenance costs and take academic decisions (this last aspect, in particular in Nicaragua). “Client power” can therefore be expressed through active participation in the management of the school and, additionally, in Nicaragua, also finds a way through the system of National, Departmental and Local Education Councils set up to ensure broad participation at all levels. The “compact” relationship between the MOE and the school, on the other hand, is made explicit in two or three main ways: (a) through the signature of the autonomy agreement, which specifies a number of technical requirements; (b) through school supervision, ensured through the establishment of a “deconcentrated” structure (regional and district offices of the MOE)<sup>9</sup> and/or strengthened central auditing functions; and (c) through the implementation of monthly transfers which include an efficiency element being allocated according to ranges of students enrolled. Finally, the on-going effort in the testing of student achievement, admittedly more advanced in El Salvador, would enhance both relationships of accountability.

## **B. Complexity and Innovation in LAC Approaches to Education Delivery**

To conclude this section it is important to point out that this simple characterization does not fully make justice to the complexity, diversity and innovatory contents of the approaches adopted in LAC. To start with, we should highlight that the differences among models are not always so clear-cut. Elements of school “autonomization” are, for

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<sup>7</sup> The so-called “Association for Community Education” (ACE).

<sup>8</sup> The so-called “Local Schools Councils” (or “*Consejos Directivos Escolares*”) and there is also a Parent Council in each school which can propose changes and adjustments to the Local School Council.

<sup>9</sup> In the case of El Salvador, supervision is facilitated by the establishment of EDUCO central and regional offices with specific coordination, supervision and support tasks.

instance, also being increasingly applied in countries included in the first two groups of models. This is particularly the case of Brazil where in most states there is a current trend towards increased school autonomy in financial and administrative aspects and the “client power” relationship is increasingly used to improve education delivery through participatory management of schools<sup>10</sup>. On a smaller scale, attempts to increase school decision-making autonomy in pedagogical matters have taken place in Chile since 1992, with the promotion of the Education Improvement Projects (*“Proyectos de Mejoramiento Educativo”* (PME)), and in Colombia with the *“Escuela Nueva”* model<sup>11</sup>.

Secondly, while we have focused our analysis of the three types of models on a few central accountability relationships, in each of the groups there were often innovations concerning other accountability relationships as well. Innovations in the “client power” relationship occurred for instance in several countries, not only in the countries of the third group. In many cases, they were related to the development of school autonomy highlighted above, i.e. they were implemented through increased participation of the communities/users in school management; in other cases, they consisted in changes in the public financing of education which aimed at empowering the users either by giving them the resources and allow them to make a choice between providers (demand-side subsidies), or, by making provider resources highly dependent on their choice (“quasi-vouchers”, capitation grants). While Box 1 below provides a succinct illustration of these types of innovations, Box 2, in the assessment section, will present a separate analysis of the Chilean and Colombian cases where “choice” was particularly developed within the decentralized education delivery system put in place, although with different objectives and on a different scale.

Finally, in several countries there were also innovations in the “management” relationship (taken broadly as the relationship between the different education actors,- the Ministry of Education, local governments, schools, etc-, and teachers). Box 1 below provides a succinct illustration of this type of innovations.

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<sup>10</sup> The most well known case is the one of Minas Gerais since the early 1990s where enhanced school autonomy in the administrative, financing and pedagogical areas was accompanied by a major democratization of school administration (through the establishment of elected school councils, or *“colegiado escolar”*) and the establishment of a public school assessment program aimed at measuring school performance in a transparent and systematic way.

<sup>11</sup> Applied in the rural sector, it is a model where teachers have much greater flexibility in making their own decisions regarding the education process and parents fully participate in school activities.

### **Box 1: Innovations in the “client power” and “management” accountability relationships**

#### ***Demand-Side Financing***<sup>12</sup>

Demand-side financing programs include a variety of mechanisms which go from conditional cash transfer programs, which provide cash on the condition that families send their children to school (“*Progresas*” in Mexico and “*Bolsa Escola*” in Brazil are probably the most well known example to date) to targeted vouchers which provide a cash payment to families to be used at a school of their choice, allowing generally for enrollment in public or private schools (see secondary education targeted voucher program introduced in Colombia in 1992). Beyond the potential impact of targeted vouchers on the enrollment of children, and, particularly, poor children, by providing “choice” to the final users of the education service (and by the same token a possibility of “exit” from inefficient schools), this financing mechanism should also help establish a clear accountability line between clients and schools which should lead schools to be more responsive to client needs.

#### ***Capitation Grants***

Of particular relevance to decentralization have been the attempts of setting up “quasi-voucher” (or capitation grant) systems which, by allocating resources to the providers according to the students enrolled, make them dependent on client choice and therefore promote competition among them for attracting and retaining students. In the LAC case, this financing mechanism has been introduced in Chile, where it also applies to private schools, applied to some extent to some Central American countries, but also more recently introduced in Brazil with the 1996 FUNDEF reform and, even more recently, in Colombia with the 2001 reform. In general, this financing mechanism has mostly involved the regional or local levels of provision, i.e. these levels receive the subsidy and not the school, increasing “client power” more indirectly or modifying the “voice” relationship at the local/regional level by also allowing an “exit” possibility at this level (in other words, this works like a “vote with your feet” type of mechanism at the local/regional level).

#### ***Teacher Incentives***<sup>13</sup>

Within the “management” relationship, countries in Latin America differ in their policies for teacher hiring, assignment to schools, promotion, and firing. Countries also differ in their compensation structures and whether they include incentives for teachers to take on additional responsibilities, to acquire stronger skills, and/or to work in schools serving disadvantaged children. Further, countries vary in the extent to which they support the provision of education by the private sector, where teacher hiring, firing, and compensation decisions are usually made at the school level. The incentives embedded in these different policies can influence the quality of teacher entrants and their decision to stay in the profession.

Several countries in the region have recently implemented policy reforms that significantly affect the teaching profession. Some examples are: Mexico’s *Carrera Magisterial* program, which entails individual-based monetary rewards for teachers based on measured performance; Chile’s SNED (*Sistema Nacional de Evaluación del Desempeño*), which consists of school-based monetary rewards to be distributed among the school staffs; and Brazil’s FUNDEF, which creates a floor for expenditures per student, and the accompanying requirement for teachers to be certified.

<sup>12</sup> A detailed description of demand-side financing mechanisms in Latin America is provided by Patrinos, H (2002): “A Review of Demand-Side Financing Initiatives in Education”, Background Paper for the WDR 2003.

<sup>13</sup> Paragraph written by E. Vegas.

## **Section II: Assessment and Main Lessons**

### **A. Summary of the Assessment**

Assessing the impact of decentralization reforms on the efficiency, quality, coverage or equity of education delivery is a difficult task for a number of reasons. Firstly, these are typically complex reforms which, as we have seen, can be designed very differently and be based on different accountability relationships: this makes it particularly difficult to assess their effects. Secondly, in most cases in Latin America (with the noticeable exceptions of Central American countries like Nicaragua and El Salvador), the reforms were implemented nation-wide making it difficult to establish a counter-factual since we do not have a control group. In that case, the only available options for attempting to disentangle the effects of decentralization from the effects of other reforms will usually be a simple before/after comparison without a control group or a before/after comparison using the fact that decentralization, even if eventually nation-wide, did not involve all geographic areas and/or schools at the same pace. If even these options are not available, measures of variability in the intensity of decentralization, by type and number of functions decentralized to the sub-national units, could still be attempted to capture some type of impact on outcome indicators. Finally, the lack of reliable data will also simply lead to much simpler evaluations centered on the analysis of intermediate indicators of efficiency, quality or poverty and/or based on much simpler evaluations methodologies. Thirdly, most of the reforms were started for reasons exogenous to the education sector (fiscal or macroeconomic reasons, broad efficiency objectives, democratization, etc) and, as such, made any subsequent assessment of the impact of the reform on educational outcomes in any case difficult because no attention was paid from the outset to baselines, identification of possible control groups and information and monitoring systems which would help assess the impact of reforms in time (no “built-in” evaluation mechanisms).

As more systematic and rigorous information on educational outcomes became available (in particular, all countries in LAC have now introduced some form of standardized testing, either on a national or sample basis), the quality of the assessments improved in time. Still, however, for the above mentioned reasons, there are very few thorough evaluations on the impact of decentralization on the quality, coverage, equity of education of the first two groups of models; while, on average, more formal evaluations have been undertaken, often as a World Bank’s initiative, of the “school autonomization” models. For this type of models, evaluations were upfront made more pertinent and easier by the fact that most experiences of “school autonomization” were implemented with specific educational objectives in mind (increase in coverage, educational quality or efficiency improvements, etc), beyond other more general objectives (such as democratization, political motivations, etc).

Overall, a number of more or less formal assessments of several countries’ decentralization experiences was put together and allowed us to find some evidence on the impact of each group of models on the quality, coverage and equity of provision, with emphasis, when possible, on the performance of the poor. Annex I presents an assessment of the studies per group of models and country, which points to the key role

of the accountability mechanisms put in place and highlights some other possible factors in determining the achievements of the reforms. Table 1, below, summarizes this evidence, which makes it possible to extract some lessons on the accountability side and the possible advantages/disadvantages of the different models. In Box, 2, which follows Table 1, we also present a special assessment of the Chilean and Colombian cases along the “client power/choice” dimension to see if we can extract some lessons on the application of this particular accountability mechanism.

**Table 1: Summary of Assessments**

Models:	Summary of findings with interpretation
<b>“Sub-national government” model</b>	
Argentina (Carciofi, Cetrangolo and Larranaga, 1996) (Galiani and Schardrosky, 2002)	In the absence of a clear “compact” between the Ministry of Education and the provinces, which was only slightly strengthened with the approval of the “ <i>Ley Federal de Educacion</i> ” in 1993, the effects of decentralization on the quality and coverage of education are found to vary a lot across provinces depending on provincial management. Quality, as measured by test scores, is shown to improve after the 1992 negotiated decentralization reform, possibly for a more effective use of “voice”.
Chile (Carciofi, Cetrangolo and Larranaga, 1996, McEwan and Carnoy, 1999a, Gauri, 1996, Espinola, 1994, Schiefelbein, 1992, 2000, Cox and Gonzalez, 1998, Rounds, 1997, Hsieh and Urquiola, 2002, Sapelli and Vial, 2002, Gallego, 2002)	The available evidence generally suggests that overall enrolment and quality (admittedly difficult to measure in the 1980s because of the absence of comparable test scores) did not improve over the 1980s (and divergence among schools increased), largely because of the poor results of the municipal sector. These poor results were mostly due to a gap between responsibility and authority to act, the presence of soft budget constraints for the operation of the municipal education sector, the lack of citizen participation mechanisms at the local level and the “missed opportunity” of exploiting the potential of the “client power” relationship as instrument to improve competition between public and private schools (see Box 2). Overall, the enrolment rate improves during the 1990s, average test scores improve for all school categories and there is increasing convergence among all these school categories, following the application of some competition-enhancing measures (although not all measures were consistent with competition-see Box 2), as well as “voice” and quality-enhancing measures (including new teachers’ incentives mechanisms).
Brazil (World Bank, 2003)	The lack of a clear compact mechanism between the center and the states/municipalities is shown to have led to a variety of experiences with different outcomes. Educational achievement outcomes and enrollment [in particular in poor areas] have substantially improved after the 1996 FUNDEF reform, largely due to an effective use of the “compact”, within a framework of extensive authority decentralized to states and municipalities, and to an effective use of teacher management. Spending efficiency varies, however, among municipalities depending on local skills and the working of “voice”.
<b>“Sub-national shared responsibility” model</b>	
Colombia (Gomez and Vargas, 1997) (Borjas and Acosta, 2000)	Poor implementation of the compact relationship and the same shared nature of responsibilities for the provision of the services hampered the effectiveness of the decentralization process in Colombia. In spite of increasing spending, enrollment and its distribution across socio-economic classes stagnated during the 1990s. Reform changed with 2001 law following a “learning by doing” type of process: a full “municipalization” model will prevail.

Bolivia (Ruiz and Giussani, 1997) (Faguet, 2000)	The shared responsibility model led municipalities to over-invest and the role of the departments is still unclear. However, following the decentralization reform, investment in education became more progressively distributed [favoured poor areas] and more responsive to local needs, due an effective use of “voice”. “Voice” effectiveness varies across municipalities.
<b>“School autonomization” model</b>	
Nicaragua and El Salvador (King and Ozler, 1998) (Jimenez and Sawada, 1998; Sawada and Ragatz, 2004)	In Nicaragua, school-based decisions on teacher management are shown to have a positive impact on test scores. In El Salvador, enrollment in the rural areas increased massively following EDUCO. It is also shown that school-based decisions on teacher management have a positive impact on class attendance and even, according to the most recent assessment, educational achievement. In both models, these positive results are the product of a well designed and effectively implemented “client power” relationship <sup>14</sup> , accompanied by a solid “compact”.
Other cases (Argentina: Eskeland and Filmer, 2002) (Brazil: Paes de Barros and Mendonca, 1998) (Chile: Di Gropello, 2002) (Honduras: Di Gropello and Marshall, 2004)	Other evidence suggests that school autonomy in several areas (financing and/or administrative and/or pedagogical, etc) increases test scores and other educational achievement indicators and that the impact of autonomy is strengthened by the use of “client power”. It is also shown in some of the studies that “client power” only has an impact combined with school autonomy. Finally, school autonomy, or increased school decision-making in local decisions, can promote convergence among rich and poor schools and its impact is likely to depend on surrounding institutional characteristics.

Source: Annex I.

### **Box 2: Decentralization to the sub-national level and “choice”: an assessment of the Chilean and Colombian cases**

Colombia introduced in 1992 a secondary education targeted voucher program which, in 1996, involved more than one-fifth of the municipalities and close to 2,000 private schools with the main objective of increasing the transition from primary to secondary education for poor students. Participation of municipalities and private schools in the voucher program was voluntary. Chile, while decentralizing the management of schools to municipalities, also introduced, in 1981, a system of “quasi-vouchers” directed to all municipal schools and non-fee-charging private schools, with the main objective of promoting competition among schools to lead to higher quality and enrollment. We provide below an assessment of these two cases based on the existing empirical evidence.

**Chile** (Carciofi, Cetrangolo and Larranaga, 1996, Gauri, 1996, Espinola, 1994, Schiefelbein, 2000, McEwan and Carnoy, 1999a,b, Rounds, 1997, Hsieh and Urquiola, 2002, Sapelli and Vial, 2002, Gallego, 2002 and Di Gropello, 2002):

During the 1980s, following the introduction of the per-student subsidy, enrolment increased considerably in the private voucher schools (from 14% in 1980 to 32% in 1990) and, controlling for socio-economic status, private subsidized schools seem to perform better than municipal schools (Carciofi, Cetrangolo and Larranaga, 1996, Carnoy and McEwan, 1999b), pointing to positive effects of competition on private schools’ performance. However, it is generally recognized in the studies that are largely centred on the 1980s period (Carciofi, Cetrangolo and

<sup>14</sup> Although this is somewhat less true in Nicaragua where directors are often said to have too much power within the school councils.

Larranaga, 1996, Carnoy and McEwan, 1999a and Hsieh and Urquiola, 2002) that competition among private and municipal schools was hampered by the lack of incentives and capacity of the municipal sector to compete (existence of soft budget constraints at the municipal level, restrictions on municipal decision-making and lack of autonomy and accountability of municipal schools), lack of clear information on relative school performance, and some “cream-skimming” (advantaged and more able students migrate to private schools thanks to informational advantages and private schools select students).

In the 1990s, on the one hand, further constraints on municipal autonomy (teacher statute of 1991) and centrally driven interventions in favour of the poorest/weakest municipal schools complicate even more the working of competition between municipal and private schools (see Di Gropello (2002) for the negative impact of the teacher statute and Sapelli and Vial (2002) for the negative impact of central interventions on competition through the implied differences in per-capita budget between the two types of schools); on the other hand, dissemination of standardized school scores (SIMCE scores), increased administrative and pedagogical municipal school autonomy, introduction of school co-financing and improved monitoring of student attendance improve the operation of the voucher system.

The studies centred on the 1990s generally confirm that private subsidized schools perform better than municipal schools (see Sapelli and Vial, 2002) and have improved their performance due to strong incentives to compete (decision-making autonomy, reliance on the voucher or parent co-financing, etc), therefore concluding that competition/choice was helpful in improving the quality and efficiency of schools (Gallego, 2002). However, the impact of competition on the performance of municipal schools remains more controversial, with some studies (see Gallego, 2002) finding that the improved municipal performance was largely due to competition (hampered by compensatory programs but enhanced by other measures-see above), while others that it was due to the central compensatory programs.

**Colombia** (King and others, 1997, 1999 and Angrist and others, 2002a,b):

The available empirical evidence (King and others, 1997, 1999 and Angrist and others, 2002a,b) suggests that, in the 20% participating municipalities, the program provided an effective way of increasing educational attainment and achievement (college-entrance test scores) for the poor students benefiting from the vouchers (with some evidence of higher achievement, as measured by test scores, among voucher recipients). Among the key factors for this success we can mention: (a) the sound criteria in the selection of the participating municipalities, such as the limited public school capacity and important private sector excess capacity; (b) the participation of private schools with educational quality comparable to public schools; and (c) the effective targeting of vouchers to poor communities, with the introduction of performance incentives for the participating beneficiaries. Political economy considerations (lack of government’s commitment, teacher union’s opposition) and administrative difficulties (delays in disbursements, burden of program monitoring) led to the discontinuation of the program at the federal level in 1997, which, however, continued in several municipalities up to this day, financed through municipal funds.

## **B. Main Lessons and Challenges Ahead**

### **Some determinants of the success or failure of each group of models**

The assessments presented in Table 1 show that the single most important factor in ensuring the success or failure of a reform is the way the accountability relationships are



set to work within each of the models. At least one “core” set of accountability relationships should work well in each of the models (e.g., “compact(s)” or “voice(s)” in the first and second groups of models, and “client power” or “compact” in the third group) and it is even better if all “core” relationships work well, in a complementary way. For example, cases like Nicaragua and El Salvador appear to have had some positive achievements because all accountability relationships were given the right importance and effectively used, and this also appears to have been the case with the 1996 reform in Brazil; in Argentina, on the other hand, too little weight was given to the “compact” relationship in a framework where “voice” was not always satisfactory, and, in Chile, too little emphasis was put on “voice” and low authority hampered the “compact”.

This result is not surprising. Going back to the principal-agent model, the agent, or sub-national level, once given decision-making autonomy will often have the temptation to use it opportunistically, i.e. putting its own interests (or the particularized interests of a local elite) before the achievement of the national objective for which decentralization was undertaken in the first place (i.e. improving student learning). In this scenario, mechanisms will need to be found to have the agent acting in the national interest and, typically, these mechanisms will consist of interventions aimed at establishing clear lines of accountability between the central level and the agent (compact) and/or clear lines of accountability between the agent and the community (voice and/or client power). These different lines of accountability will generally have the capacity of complementing each other (for instance, when it comes to monitoring education delivery, local residents or school users will often be able to monitor the attendance of teachers to classes, while the centre will be more likely to have the tools and knowledge to monitor general academic standards). In the absence of any working accountability line, it is unlikely that decentralization will lead to any positive result.

How to get accountability relationships working effectively within each of the models becomes then the key question. This is difficult to establish, but a number of lessons can be extracted from our case studies:

(a) there needs to be a certain level of **consistency** between the model selected and the relationships of accountability on which the emphasis is put: in Chile, the achievements of the reform were hampered by the fact that the special emphasis put on the “client power/choice” relationship was not accompanied by measures to increase autonomy and accountability of municipal schools (too protected from competition), while, at the same time, the “municipalization” model was developed with no focus on the “voice” relationship;

(b) there needs to be **real transfer of authority** to the sub-national units: the gap between responsibility and authority to act hampered the good functioning of all accountability relationships in Chile and some existing evidence suggests that the same is also valid for Mexico. In both countries, centralized teacher management practices represent the stronger management constraint for the sub-national level;

(c) **consensual reforms** are more likely to be conducive to strong “voice” and/or “client power” relationships (in a positive sense, this is illustrated by the 1992 “provincialization” in Argentina and the “municipalization” process in Bolivia) and to a sustainable transfer of authority necessary for the good working of all the relationships (in Chile, the creation of a broader-based consensus on the reform in the 1980s would have probably avoided the partial reversal of the reform in 1991 with the approval of a very rigid teacher statute);

(d) how to design and implement effective “compact” relationships. This is a particularly difficult challenge because, going back to the principal-agent model, there will typically be significant information asymmetries between the center and the agent (i.e. the effort and ability of the agent is unobserved) which will complicate the design and implementation of contracts between the parts. There are no clear-cut solutions to this challenge which has been widely debated in the literature. Our case studies do not probably provide “best practices” in this area, but allow us to identify practices that work/are necessary to develop effective accountability lines between the center and the agent, divided in two main groups:

- Practices aimed at inducing efficient and equitable behaviors:
  - (i) clear definition of all actors’ responsibilities, through well-designed legal and/or administrative instruments (Education Laws, Transfer Agreements, etc): Chile and Nicaragua have been successful in defining relative responsibilities through administrative transfer agreements, while Colombia, where responsibilities became quickly blurred across actors, recently introduced a comprehensive Education Law which establishes quite clearly relative responsibilities;
  - (ii) use of simple fund allocation formulae, such as per-student fund allocations (capitation grants): Chile and Brazil have been successful in applying this fund allocation mechanism, which is particularly useful to increase enrollment, Colombia will adopt it after the failure of its overly complicated formulae;
  - (iii) use of hard budget constraints for local governments (and schools): the efficiency of the municipal sector and its capacity of competing against the private sector was weakened by the existence of soft budget constraints for municipalities (and schools) in Chile; soft budget constraints for municipalities also encouraged Colombian municipalities to hire teachers and run deficits; the importance of sound local fiscal behaviour is also confirmed by the recent evidence on Argentina (the positive impact of decentralization on test outcomes decreases as the provincial deficit increases);
  - (iv) use of per-capita spending targets instead than formulae attempting to measure basic needs, poverty, etc, indicators too subject to “adverse selection” problems: Brazil obtained equitable results by fixing national floors in per

student educational spending, while Colombia did not using complicated equity-adjusted formulae.

- Practices aimed at improving information:
  - (i) development of monitoring/supervisory systems through: (a) the strengthening of central auditing functions, including the capacity of keeping track of public resources: Nicaragua, for instance, added a new central department in the Ministry of Education, whose main function was the one of auditing the finance and handle the fiscal administration of the new decentralized system; while Mexico failed to really improve central auditing practices; and (b) the effective use and/or establishment of a regional deconcentrated monitoring structure, such as in Chile with the role of provinces in the monitoring of student attendance or in El Salvador with the establishment of EDUCO central and regional offices with specific coordination, supervision and support tasks;
  - (ii) development of evaluation systems through the introduction and systematization of standardized testing: Chile was, for instance, successful in introducing at the end of the 1980s a national standardized testing system, called SIMCE, which allowed the government and all other actors involved in education (teachers, parents, etc) to have objective information on municipal and school performance; most other countries have by now introduced some form of standardized testing, although not necessarily on a national scale.

(e) how to implement effective “voice” relationships. In a setting where asymmetries of information between the centre and the sub-national level are pervasive, the role of the community (either through the long route to accountability, i.e. voice, or through the short route, i.e. client power) will be all the more important to help providing the incentives for effective service delivery. Our case studies indicate that to create an effective accountability relationship between the community and the sub-national government, a first necessary step will be the organization of **local/regional elections**: in all countries, these elections were, at least to some extent, used as a tool to express preferences on education (which does not necessarily happen in national elections, dominated by other topics). To provide more strength and continuity in this accountability relationship, the cases studies also show, however, that the establishment of well-functioning and truly representative **civic organizations** with extended reporting and monitoring responsibilities will be necessary: in Bolivia, for instance, special oversight committees were created in all municipalities to oversee municipal spending and propose new projects with, on average, satisfactory results; while in Brazil, the establishment of local social councils led to rational/ efficient behavior in several municipalities. Still, regarding civic organization, our evidence also shows that, although these arrangements might coordinate and convey voice effectively, often they lack the means of enforcing change, raising an issue of “voice” effectiveness.

(f) how to implement effective “client power” relationships based on a “choice” strategy. How choice between providers can lead to better educational outcomes is another widely debated issue, to which we can only provide some partial response based on Chile and Colombia. We can make the following points (based on the evidence presented in Box 2):

- (i) Applying a national voucher system with the aim of promoting competition among schools will generally require different pre-conditions (and generally more stringent) than a system of targeted vouchers aimed at sending low income students to private schools;
- (ii) Conditions on the supply-side for the national voucher system include the need to ensure that (a) all schools have the incentive and capacity to compete: significant levels of school decision-making autonomy and hard budget constraints will be important elements here; and (b) all schools report thoroughly their student enrollment: effective monitoring systems will be important here;
- (iii) Conditions on the demand-side for the national voucher scheme include the need to ensure that (a) all final beneficiaries of the services have information on relative school performance: introduction of standardized testing and publication of the schools’ results is an important element here; and (b) students are free to move among schools: regulation of schools’ selection practices would be useful here;
- (iv) Conditions on the supply-side for the targeted voucher scheme include the need for substantial private sector excess capacity and participation of private schools with educational quality at least comparable to the one of public schools;
- (v) Conditions on the demand-side for the targeted voucher scheme include the need for effective targeting of the vouchers to poor communities, effective mobility of students across the participating schools, and effective monitoring of student attendance and performance;
- (vi) Conditions common to these two schemes will include the establishment of effective systems to monitor student attendance and regulate schools’ student selection practices.

(g) how to implement effective “client power” relationships based on a strategy of parent participation. Our case studies show that this accountability relationship will be strengthened by the introduction of elected **school councils** with substantial responsibilities in service delivery (responsibilities in the hiring, firing and monitoring of teachers will be particularly important), also implying substantial school decision-making autonomy: Nicaragua and El Salvador were both successful in empowering parents through the creation of generally well functioning elected school councils.

### **Is there a model better than another ? What are the common challenges ?**

Our analysis also allows us to go beyond the analysis of each group of models to make some comparisons across groups and countries and detect more general challenges and future directions in selecting “successful” models. Five main points can be made here.

- ***Avoiding complicated models:*** The experiences of Colombia and, to a minor extent, Bolivia seem to indicate that the second group of models, involving more than one political sub-national actor in service delivery with complementary functions, makes the creation of an effective accountability system particularly difficult. The difficulty of this challenge might advise for a simpler delivery model (and this is the trend currently pursued by the Colombian reform);
- ***Increasing school autonomy and the scope for “client power”:*** Several case studies that we have reviewed indicate a positive impact of school decision-making autonomy in some areas on the quality and even equity of education. This seems to suggest that decentralizing responsibilities to the school in some areas, and particularly in the teacher management area, makes it possible to maximize the use of local information and accountability mechanisms. It seems that in Nicaragua and El Salvador, for instance, decentralized teacher management was made particularly effective by parents’ enhanced control on teachers, that is by the expression of “client power”. Does, therefore, the relative success of school autonomy suggest that an education delivery model which enhances the “client power” relationship is more likely to succeed than models which emphasize “voice” (such as the sub-national government models) and/or “compact” ? This is an interesting question to which it is difficult to give a reply. It is likely that, given the peculiarities of the educational process (proximity to the final users, continuity in the provision of the service, limited teachers’ informational advantages), the scope for user participation is particularly important in education and needs to be fully exploited. This does not mean that “client power” alone is sufficient to ensure that all the benefits of decentralization materialize: a solid “compact” will also be needed to ensure the fulfillment of coverage, efficiency and equity targets (in Nicaragua and El Salvador, for instance, parents have been particularly effective in monitoring teacher behavior and the allocation of school funds, ensuring the achievement of efficiency and quality targets, but it is the Ministry of Education that, through its financial transfers tied to the number of students and continuous monitoring, ensures minimum levels of coverage, equity and efficiency). Similarly, “voice”, i.e. the so-called “long route” of accountability, still has a role to play insofar as local communities through their influence on national and/or sub-national governments will have, at a minimum, an impact on the establishment of the overall legislative, administrative and financial framework of education delivery. **To sum up, within an education delivery model, there seems to be ground for maximizing the scope for “client power” through an increase in school decision making autonomy, at least in certain areas, without, however, losing the contribution that can be given by the other accountability relationships.**

In practice, what this conclusion implies for the models of the first two groups, where intermediate political actors are the main actors responsible for the delivery, is that these models need to increase the role of schools as decision making actors. As we have seen above, this is essentially happening in most Latin American countries. This new trend introduces new challenges in these models. Should the school directly be put at the center of the delivery model (like in the “school autonomization” model) and all other actors, which have an established institutional history in the country, be simply used as “support” actors with a monitoring/supervisory role ? Or should these actors still have a number of responsibilities, for instance in infrastructure and teacher management, and, therefore, an efficient way of sharing responsibilities across multiple actors should be found ? This second type of model would have the advantage of exploiting all accountability relationships (since, for an issue of size, “voice” will be more effective at the sub-national than at the national level), but might be difficult to manage for the reasons highlighted above (see “avoiding complicated models”). This challenge is or will be particularly difficult for non federal countries like Chile, Colombia and Bolivia, which are trying, to different extents, to increase school autonomy in the context of systems where the MOE still has a lot of authority and the sub-national governments are generally middle sized, with the consequence of having three or even four levels of delivery. **Essentially, more evidence would be needed on the type of institutional setting that would create the best environment for increased school autonomy in the countries where schools have not been at the center of the process up to now (i.e. countries of the first two groups).**

- ***Putting more emphasis on the “management” accountability relationship and sustainability issues:*** as countries increase school autonomy there will also be more scope for acting on the “management” relationship, which is essential given that teachers are the most crucial actor in the educational process and improving teachers’ incentives to provide quality education should therefore be part of each reform attempt. In Nicaragua, El Salvador and Honduras, for instance, teachers’ incentives to perform effectively have been enhanced through higher school decision-making and higher parental participation (and in fact, the focus on teacher management can partly explain the effectiveness of these decentralization reforms). An improvement of teachers’ incentives, if we see that as the ultimate objective, could, however, also take place through the implementation of other decentralization models (this is the case of Brazil, for instance, where the FUNDEF reform was accompanied by the explicit target of improving the salaries, qualifications, career prospects and performance of teachers, in particular in the municipal system) or even separately from decentralization (this is the case of Chile where the school-based monetary rewards to be distributed to teachers are decided by the center), illustrating cases of improved teacher management which do not necessarily involve decisions at the school level. **In any case, the empirical evidence shows that the “management” accountability relationship, interpreted in a broader sense to include all cases of improved teacher**

**management, needs to be given special emphasis in education delivery models.**

This is all the more important giving the strength of teacher unions in Latin America. Teacher unions can be said to constitute another main component of each of the models, with their own relationships towards each of the main actors of the models (the national and sub-national governments, schools, etc). As decentralized teacher management to the sub-national or school level is generally part of a decentralization reform, teachers unions are directly concerned about the reform. There is hardly any empirical evidence on how teacher unions' behavior influenced the outcomes of the reforms, what is sure, though, is that, in some cases, because of their disagreement, reforms were either blocked (case of Mexico during several years), made less extensive or partially reversed (case of Chile with the approval of the rigid 1991 Teacher Statute). There were also other cases, like the Central American ones, where rigid teacher statutes were simply circumvented by establishing a parallel teacher hiring and firing system at the school level (i.e. leading schools to manage teachers outside the limitations imposed by the teacher statute). In all cases, the same sustainability of the reform is at stake. Essentially, teacher unions are often worried that decentralization will mean losing a number of privileges associated with the teacher profession (open-ended employment status, etc) and, therefore, will often be opposed to the reforms. In this scenario, instead of excluding them from any debate and decision, measures will need to be found to bring them on board. Compensating the possible lost privileges on the type of appointment by special pecuniary rewards and new possibilities of professional development, through well-designed teachers' incentive policies, could be a way to go, explaining why good teacher management policies are so important (the dialogue with teacher unions improved in both Chile and Mexico after the introduction of the recent teachers' incentives mechanisms). On another scale, countries like El Salvador and Nicaragua have managed to attract teachers in the autonomous schools through a policy of high salaries and other benefits (in contrast to Honduras): the parallel teacher system still exists, however, raising a persistent sustainability issue.

- ***Learning from the “best performers” within the country:*** We should also add that there is evidence of substantial heterogeneity in the performance of the education delivery model within the same country. In other words, the same delivery model can be producing different outcomes depending on the state, province, municipality of the country. This suggests that, in some cases, before trying to modify the model (or as we modify it), it would be worth trying to improve our understanding of why some sub-national governments do better than others and find effective ways of sharing these “good practices”. It is likely that the main determinants of performance at the local level are similar to the ones we have already established and, therefore, that the good functioning of the accountability mechanisms be essential. The cases of Brazil and Bolivia, where the good functioning of the social councils and monitoring committees effectively

empowered the local communities in some municipalities making a substantial difference at the local level, illustrates this point. There might, however, be other factors specifically related to local management practices which explain the differential in performance. As suggested by the current delivery model in Argentina and the school autonomy experiences in Brazil, different institutional, fiscal and political characteristics of each state or province might produce different results in different parts of the country. **An important challenge ahead would be the one of detecting the “best performers”, establish why they are “best performers” and find ways to move the sub-national governments whose performance is not as good to learn from these “best performers”.**

- ***“Learning from other countries” or “learning by doing”***: Finally, identifying the “right” model and institutional set-up for each country is not an easy task and the main issue here is how to proceed to make this happen. A first way of proceeding would be through an effective sharing of international experiences in decentralization reforms, so as to “learn from the mistakes” of other countries and avoid wasting time and funds in badly designed reforms. Along this line, Bolivia might have a possibility now to learn from Colombia and instead of deepening the “shared responsibility” model, skip that stage and go for a straight “municipalization” one. This is a useful path which, however, needs to be taken with care to avoid comparisons among very different countries.

Another way of proceeding is simply by “learning by doing”. In fact, this is what most of the countries of the region have done (see Chile, Colombia, etc) and this raises the question of how “learning by doing” can be most effectively implemented so that it can consolidate or change the direction of a reform when necessary. Do we need to set in place precise evaluation strategies from the beginning of the reforms which allow us to measure the progress of the reform in time, or simply be sure that a good enough monitoring system is in place to make ex-post assessments possible ? The first methodology was applied in Nicaragua, through the evaluation strategy of the “*centros autonomos*” put in place in 1995, while the second one in El Salvador, through the practice of publishing ex-post assessments of the year (“*Informes Anuales de Labor*”), and Chile, through the nation-wide implementation of standardized testing which gave rise to several ex-post assessments of the 1980’s reform. Following the ex-post assessments, in El Salvador it was decided to extend somewhat the EDUCO model to traditional schools and in Chile to gradually modify the decentralization model. **Overall, another challenge ahead is the design of strategies which would make it possible to maximize the impact of “learning from others” and “learning by doing”** (for instance, an issue here is how to design a “learning by doing” strategy not too costly but which can provide timely feed-back).



## ANNEX I. CASE STUDIES

### A. Available case studies on the “sub-national government” model

#### Argentina

**In the absence of a clear “compact” between the Ministry of Education and the provinces, which was only slightly strengthened with the approval of the “*Ley Federal de Educacion*” in 1993, the effects of decentralization on the quality and coverage of education are found to vary a lot across provinces depending on provincial management. Quality, as measured by test scores, is shown to improve after the 1992 negotiated decentralization reform, possibly for a more effective use of “voice”.**

#### **Evidence:**

An informal, mostly descriptive, assessment carried out by Carciofi, Cetrangolo and Larranaga in 1996 shows that following the 1978 first decentralization process, while all provinces increased expenditure in education and the overall national primary enrollment rate increased, the size of the increase and the allocation of that increase across alternative uses (hiring of new teachers, salary increases, new investments, etc), as well as the evolution of the primary enrollment rate, varied substantially across provinces depending on indicators of fiscal solvency, other provincial constraints (like the weight the trade unions) and specific provincial educational choices. Similarly, a formal evaluation (Galiani and Schardrosky, 2002) of the 1992 process of secondary education decentralization to the provincial level<sup>15</sup>, finds overall significant positive effects of the “provincialization” of education on the quality of education measured by standardized test scores<sup>16</sup> but that this impact depends significantly on the provincial fiscal result, as measured by the provincial fiscal deficit/surplus (i.e. the positive impact of decentralization on test outcomes decreases as the provincial deficit increases). The two papers also indicate that the “voice” accountability mechanism as control over local politicians or local participation in education management does not seem to have played a major role in the achievement of certain educational outcomes, largely because of the sizes of the provinces<sup>17</sup>. However, above all in the negotiated/consensual 1992 reform, it is also shown that there was still at work a “voice through vote” mechanism which is likely to have led voters to concentrate on education issues at the

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<sup>15</sup> This study exploited the fact that decentralization took place gradually between 1992 and 1994 and therefore induced an exogenous variation in the administration of secondary schools across units and time to assess the impact of decentralization on test scores using a difference-in-difference estimator (two-way fixed effect error component model). More specifically, the identification strategy exploits the fact that the exposure to education decentralization of a final year secondary school student varies both by province and student cohort (i.e. it also assumes that test scores are correlated to the number of years that a student spends under one or the other administration regime). The model also controls for the possibility that unobservable factors cause the evolution of test outcomes to differ across provinces, thereby violating the common time effects assumption, by estimating a difference-in-difference of the difference of public and private test outcomes and for the existence of heterogeneous impact of decentralization on test outcomes through interactions between the decentralization variable and other covariates.

<sup>16</sup> The paper finds that, on average, between 1994 and 1998, test outcomes of public schools improved 1.2 standard deviations of its distribution as a result of the decentralization process.

<sup>17</sup> In Galiani and Schardrosky, 2002, this is shown by the fact that the interaction between provincial size and the decentralization variable is not significant which can simply be interpreted as an indication that at a large size, size does not really matter anymore.

provincial level and, say, macroeconomics at the national level<sup>18</sup>, explaining the incentive to increase and, to some extent, allocate according to needs, education spending at the provincial level.

## **Chile**

**The available evidence generally suggests that overall enrolment and quality (admittedly difficult to measure in the 1980s because of the absence of comparable test scores) did not improve over the 1980s (and divergence among schools increased), largely because of the poor results of the municipal sector. These poor results were mostly due a gap between responsibility and authority to act, the presence of soft budget constraints for the operation of the municipal education sector, the lack of citizen participation mechanisms at the local level and the “missed opportunity” of exploiting the potential of the “client power” relationship as instrument to improve competition between public and private schools.**

**Overall, enrolment rates improve during the 1990s, average test scores improve for all school categories and there is increasing convergence between all these school categories (i.e. municipal vs. private, subsidized or not, and private subsidized vs. private schools), following the application of competition, “voice” and quality-enhancing measures.**

### **Evidence:**

Most existing studies on Chile do not strictly focus on the assessment of the “municipalization” process itself but compare, often through cross-section education production functions which include dummies to capture the type of school management, the performance of municipal with private subsidized schools (which also receive the public sector subsidy) to assess relative management efficiency and see how competition impacted the quality of municipal schools.

We provide below a general storyline of what the Chilean experience of decentralization with “choice” seems to have shown.

During the 1980s, following the introduction of the per-student subsidy, enrolment increased considerably in the private voucher schools (from 14% in 1980 to 32% in 1990) and, controlling for socio-economic status, private subsidized schools seem to perform better than municipal schools (see Carciofi, Cetrangolo and Larranaga, 1996, Carnoy and McEwan, 1999b), pointing to positive effects of competition on private schools’ performance. However, it is generally recognized in the studies that are largely centred on the 1980s period (see Carciofi, Cetrangolo and Larranaga, 1996, Carnoy and McEwan, 1999a and Hsieh and Urquiola, 2002) that competition among private and municipal schools was hampered by the lack of incentives and capacity of the municipal sector to compete (existence of soft budget constraints at the municipal level, restrictions on municipal decision-making and lack of autonomy and accountability of municipal schools), lack of clear information on relative school performance, and some “cream-skimming” (advantaged and more able students migrate to private schools thanks to informational advantages and private schools select students)<sup>19</sup>. As a consequence, the available evidence

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<sup>18</sup> This point is developed in the comments of Mariano Tommasi to Galiani and Schardrosky, 2002.

Tommasi mentions that: “education might have become the focus of provincial electoral concerns”.

<sup>19</sup>In particular, McEwan and Carnoy (1999a), adopting both a first-difference and difference-in-difference specification over the 1982-1996 time period, estimate the impact of competition on public school quality and reach the conclusion that competition did not lead to increased quality, mentioning the lack of municipal school autonomy as one of the main reasons for this; while Hsieh and Urquiola (2002) find that

generally suggests that overall enrolment and quality (admittedly difficult to measure in the 1980s because of the absence of comparable test scores) did not improve over the 1980s (and divergence among schools increased)<sup>20</sup>. From the decentralization and accountability perspective, we can say that the poor results of the municipal sector were probably mostly due a gap between responsibility and authority to act, the presence of soft budget constraints for the operation of the municipal education sector, the lack of citizen participation mechanisms at the local level (mayors appointed, lack of local participation bodies) and the “missed opportunity” of exploiting the potential of the “client power” relationship as instrument to improve competition between public and private schools, due to the reasons just mentioned plus the lack of municipal school autonomy and the information and selection constraints on the demand-side.

In the 1990s, on the one hand, further constraints on municipal autonomy (teacher statute of 1991) and centrally driven interventions in favour of the poorest/weakest municipal schools complicate even more the working of competition between municipal and private schools (see Di Gropello (2002) for the negative impact of the teacher statute<sup>21</sup> and Sapelli and Vial (2002) for the negative impact of central interventions on competition through the differences in per-capita budget between the two types of schools that they imply); on the other hand, dissemination of standardized school scores (SIMCE scores), increased administrative and pedagogical municipal school autonomy, introduction of school co-financing and better monitoring of student attendance (through the provinces) improve the operation of the voucher system. Additionally, in an attempt to create more national consensus and strengthen “voice”, mayors were elected in 1992 and municipal management was made more participatory in 1995/1996. Overall, average test scores improve during the 1990s for all school categories and there is increasing convergence between all these school categories (i.e. municipal vs. private, subsidized or not, and private subsidized vs. private schools)<sup>22</sup>. The studies centred on the 1990s generally confirm that private subsidized schools perform better than municipal schools (see Sapelli and Vial, 2002<sup>23</sup>) and have improved their performance due to strong incentives to compete (decision-making autonomy, reliance on the voucher or parent co-financing, etc), therefore concluding that competition/choice was helpful in improving the quality and efficiency of schools (Gallego, 2002<sup>24</sup>). However, the impact of

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communities with higher private enrollment shares saw public school performance fall from 1982 to 1988, concluding to important negative effects of “cream-skimming”.

<sup>20</sup> A study from Schiefelbein (1992) shows, insofar as test scores are really comparable over the 1980s which is not quite the case, that overall test scores were at best stagnant over the 1982-1990 time period and that while high income students (mostly enrolled in private schools) tended to have an improvement in their results, middle or low income students (enrolled in municipal schools) saw their results decrease.

<sup>21</sup>Di Gropello (2002), through the estimation of an expanded education production function covering 50 municipalities and more than 500 schools over the 1992-1996 time-period, attempts to assess the impact of decentralization measures in different areas on test scores taking advantage of the variability among municipalities in the “de-facto” application of autonomy measures. The results show that partial measures of financial and labour decentralization at the municipal level were negatively related to educational achievement because of the constraints imposed on municipal management.

<sup>22</sup> A study of Cox and Gonzalez (1998) shows increasing overall SIMCE scores in the 1990-1996 time period and a decreasing gap between municipal and private schools. Additionally, there are also indications that within the same municipal sector, test scores became slightly more homogeneous across schools. Gallego (2002) shows convergence among private non-subsidized schools and subsidized schools in the 1988-1999 time period.

<sup>23</sup> Sapelli and Vial (2002), using the new individual data available for the 1998 SIMCE test score, estimate the average treatment effect parameter and treatment on the treated for those students effectively choosing a private voucher school, controlling for the selection bias caused by school choice.

<sup>24</sup> Gallego (2002), using roughly 5,000 Chilean schools in the 1994-97 period and econometric techniques robust to endogeneity, presents empirical estimations that show a positive and relevant effect of

competition on the performance of municipal schools remains more controversial, with some studies (see Gallego, 2002) finding that the improved municipal performance was largely due to competition (hampered by compensatory programs but enhanced by other measures-see above), while others that it was due to the central compensatory programs.

## **Brazil**

**The lack of a clear compact mechanism between the center and the states/municipalities is shown to have led to a variety of experiences with different outcomes. Educational achievement outcomes and enrollment [in particular in poor areas] have substantially improved after the 1996 FUNDEF reform, largely due to an effective use of the “compact”, within a framework of extensive authority decentralized to states and municipalities, and to an effective use of teacher management. Spending efficiency varies, however, among municipalities depending on local skills and the working of “voice”.**

### **Evidence:**

No formal, quantitative assessments have been made of Brazil as a whole because of the size of the country. Additionally, since the delivery system has been decentralized since the 1930s it is difficult to isolate and study a clear decentralization moment/phase. It is clear that, as for Argentina, the lack of a clear compact mechanism between the center and the states/municipalities, led to a variety of experiences with different outcomes, which are documented under the form of case studies generally mostly qualitative in nature. If it is therefore impossible to provide an overall assessment of the reform.

In 1996, there was, however, a particularly innovatory reform which introduced a new financing mechanism (the so-called FUNDEF) which collects resources from state and municipal governments in a single fund and re-distributes them to the state and municipal systems according to the amount of students enrolled in each system to address the divergence between resource needs and availability (a national per-student spending floor is also established to ensure minimum levels of spending in all states and municipalities). A recent study undertaken by the World Bank (World Bank, 2003) on the impact of this reform on resources, incentives and outcomes found that this new resource allocation system between states and municipalities led to a renewed “municipalization” process in the whole country which was very effective in increasing enrollment (the net enrollment rate increased from 89% to 96% in the time period 1996-2000), in particular in the poorer states of the north and north-east (where education spending per student also increased the most). Additionally, as shown through a formal econometric analysis<sup>25</sup>, “municipalization” was also significantly associated with better indicators of educational achievement (higher pass rate and lower drop-out rate and age-for-grade distortion). What has been at work here is the combination between a strengthened “compact” relationship (fiscal transfers tied to students) clearly aimed at increasing enrollment and a “voice”

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competition on the results of subsidized schools (more so for the private subsidized ones which face incentives more directly related to performance, but also municipal schools improved).

<sup>25</sup> Since information was available for both 1996 (before the FUNDEF reform) and 2000 (after the FUNDEF reform), both a cross-section and a first-difference model, aggregated at the municipal level, could be estimated, exploiting the change in space and in time of the indicators (additional resources, expenditure composition and level of “municipalization” were the three main independent variables in a set of regressions attempting to explain drop-out rate, age-for-grade distortion and passing rate).

accountability mechanism working generally well at the municipal level (also recently strengthened by the creation of social councils in municipalities and states) which led to “rational” resource allocations where municipal capital and personnel expenditures were generally related to system needs (while competition between municipal and state delivery systems, which was also supposed to be promoted by the per-student subsidy, does not seem to have played a major role<sup>26</sup>). Still, it was also found that some municipalities use resources more productively than others, depending on local skills and the effective implementation of “voice” (through the social councils). Finally, the reform was implemented within a consensual framework and also gave special emphasis to improving the salaries, qualifications, career prospects and performance of teachers, in particular in the municipal sector (among other interventions, 60% of FUNDEF resources have to be spent on the payment of teachers).

## **B. Available case studies on the “sub-national shared responsibility” model**

The reforms in Bolivia and Colombia were implemented within a generally consensual framework with an objective of promoting democratization and re-distributing political power among actors. As such, as we have seen above, they have attempted to involve several actors in the provision creating a complex system of accountability relationships.

There are generally no formal evaluations of these models, with the exception of the study of Faguet on Bolivia (Faguet, 2000), which is however only focused on intermediate quality indicators, but some qualitative/quantitative assessments that provide clear insights on the weaknesses/strengths of the reforms.

### **Colombia**

**Poor implementation of the compact relationship and the same shared nature of responsibilities for the provision of the services hampered the effectiveness of the decentralization process in Colombia. In spite of increasing spending, enrollment and its distribution across socio-economic classes stagnated during the 1990’s.**

#### **Evidence:**

Evaluations made by Gomez and Vargas (1997) and Borjas and Acosta (2000), focused on intermediate quality, efficiency and equity indicators, make it clear that the Colombian service delivery model is a problematic one essentially because of the way the compact relationship between levels of delivery was designed and implemented and because of the same shared nature of responsibilities for the provision of the services which makes the creation of an effective accountability system particularly difficult. On the compact relationship, three central problems were: (a) the lack of an information/monitoring system at all levels to assess if the departments implement the national norms for the administration of teachers and the use of the financial resources transferred to the different levels; (b) the complexity and lack of transparency of the fund allocation formulas still too much focused on costs while at the same time trying to introduce indicators of efficiency and equity difficult to measure and monitor which ended up leading to inefficient and unequal resource allocation across geographic areas; and (c) the “accreditation” process which, while representing an innovative way of addressing institutional constraints to service delivery, was implemented so as to leave too much leeway to the

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<sup>26</sup> Among the reasons for this is the scarce comparative information available on the quality of state and municipal systems and the fact that municipalities and states often divided the provision of primary education among themselves following the following pattern: 1-4 grades municipalities and 5-8 grades states.

departments, ending up being driven by political more than technical considerations. The dispersion of responsibilities across political actors, while it can make sense to suit broad democratization objectives and the specificities of each actor, complicates substantially the working of the accountability relationships because of the absence of a level clearly responsible for service delivery and the confusion that could arise from an unclear distribution of responsibilities among actors: in Colombia, for instance, the initial compact relationship was put under strain because the division of responsibilities brought the departments to be relatively uninterested in the final delivery of the service leading them to make unequal allocations of teachers across municipalities. This unequal allocation, together with soft budget constraints at the municipal level, would then bring these same municipalities to also hire teachers, at the cost of investment and/or running deficits, blurring the division of responsibilities and leading to inefficient allocation of resources. Additionally, under these circumstances, also the voice relationships at both levels were weakened as citizens found it difficult to express their preferences to actors which have only partial and/or unclear responsibility on the provision of the services. The only available evidence on outcomes, with no formal link made to the reform, however, suggests that while education spending increased substantially in Colombia over the 1990's (from 3.2% of GDP in 1990 to 4.5% in 1997), enrollment rates tended to increase slightly between 1991 and 1994 and stagnate, or even decrease, between 1994 and 1998 (Borjas and Acosta, 2000). No convergence between enrollment rates of different socio-economic strata can be noticed.

We should note that, without a formal evaluation of the reform but with the elements provided by several partial assessments and, above all, a "learning by doing" type of experience, it was formally decided to introduce a substantial modification of the Colombian decentralization reform in 2001 (Law N. 715, December 2001) along two main lines: (a) the simplification of resource allocation, through the creation of a General Co-Sharing System ("*Sistema General de Participaciones*") which includes all funds directed to education and allocates them according to students enrolled; and (b) the unification of the responsibilities at the level of only one political actor (department or municipality), accompanied by the automatic "accreditation" of all municipalities with more than 100,000 habitants and a possible "accreditation" of all municipalities assuming they fulfill certain minimum institutional conditions. Doing so the country has decided to give up the shared responsibility model altogether taking the path, slowly but surely, of a "municipalization" model or at least of a "geographically" differentiated model where the department would have full responsibility on the delivery only when the municipality is too small or unprepared.

## **Bolivia**

**The shared responsibility model led municipalities to over-invest and the role of departments is still unclear. However, following the decentralization reform, investment in education became more progressively distributed and more responsive to local needs, due an effective use of "voice".**

### **Evidence:**

A study made by Ruiz and Giussani (1997) on Bolivia, also largely focused on intermediate indicators, finds the same "potential" accountability problem in Bolivia (potential because the Bolivian reform was much less advanced than the Colombian one in 1997) and fears that, by being only responsible for school infrastructure, municipalities might over-invest, not taking into account recurrent needs. This is another possible outcome of the same initial division of responsibilities which might not be all negative if investment is low and voice is effectively

expressed at the local level so as to produce a distribution of investment spending proportional to local needs. In fact, the study of Faguet (2000), through rigorous econometric analysis<sup>27</sup>, finds that decentralization: (a) through the application of the per-capita criterion resulted in a massive shift of resources in favour of smaller poorer municipalities; (b) changed the composition of capital spending, away from economic production and large scale infrastructure, towards education, urban development and water and sanitation; and (c) led public investment to become more responsive to local needs as illustrated by the fact that investment in education increased where literacy rates were low. Assuming a not too strong imbalance with recurrent costs, this is a positive consequence of the Bolivian reform which, however, seems to be much more the product of a deep democratization reform, combined with a clear destination and allocation rule of the resources transferred to the municipalities, than of the shared responsibility model itself. Democratization, beyond local elections, promoted the creation of civic organizations at the local level with the specific purpose of overseeing municipal spending and propose new projects (the Oversight Committees, or “*Consejos de Vigilancia*”)<sup>28</sup>, and a participatory planning process, through the elaboration of the “Development Municipal Plan”. In fact, it is noticeable that the “voice” and “compact” relationships could be fairly well handled, more effectively than in Colombia, even within this shared model (the role of the departments was, however, still much less defined in Bolivia than in Colombia in 2000 leaving lack of clarity in the area of human resource management).

### **C. Available evidence on the “school autonomization” model**

Where more formal assessments exist is on the decentralization models that put the focus on the schools. In particular, the two decentralization experiences of Nicaragua and El Salvador were thoroughly evaluated.

#### **Nicaragua and El Salvador**

**In Nicaragua, school-based decisions on teacher management are shown to have a positive impact on test scores. In El Salvador, enrollment in the rural areas increased massively following EDUCO and it is shown that school-based decisions on teacher management have a positive impact on class attendance or, even, test scores. In both models, these positive results are the product of a well designed and effectively implemented “client power” relationship, accompanied by a solid “compact”.**

#### **Evidence:**

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<sup>27</sup> More specifically, a formal test of whether decentralization changed the pattern of public sector investment in Bolivia is undertaken by decomposing investment patterns into 3 terms (a state effect, which captures all of the characteristics of a state fixed in time, a year effect, which captures year shocks and time-specific characteristics, and a decentralization-interacted state effect, which captures state-specific characteristics commencing in 1994 which were previously absent (this term captures the effects of local government, local civic associations and other local institutions that sprang up with the reform)) and performing different tests on the coefficients.

<sup>28</sup> The role of civic organizations in the aggregation of preferences, representation of community needs and mediation of community participation in the production of public services, as the need for analyzing why certain civic organizations are more successful than others (the extent to which citizens are able to make local government do things for them), is particularly stressed by Faguet (2000).

The evaluation of the Nicaragua's reform has been underway since 1995, undertaken by a team of the Ministry of Education and the World Bank's Research Group, and has produced a number of special school-household surveys and informal assessments<sup>29</sup> which have allowed a continuous monitoring of the reform in time, constituting, as such, a unique case in Latin America. In 1998, King and Ozler (1998), building on these past assessments and data collection, attempted to undertake a particularly thorough evaluation by estimating an expanded education production function which allows for the estimation of the impact of decentralization by comparing autonomous schools with non-autonomous and private schools<sup>30</sup>. Their study finds that school management, measured by the degree of autonomy of the school, is an important determinant of student performance and, more specifically, disaggregating the school autonomy measure, that schools that take more decisions on teacher management (hiring and firing of teachers, evaluation, supervision, training, etc) are likely to be more successful in increasing student achievement<sup>31</sup>.

A similarly thorough evaluation was also made of the El Salvador's EDUCO model in 1998 by Jimenez and Sawada (1998) and in 2004 by Sawada and Ragatz (2004). The first thing to say is that there is clear evidence that EDUCO, which was firstly conceived as a way to expand educational access in the rural areas, was successful in doing so (starting from a much lower point in 1990, the gross and net enrolment rates are currently higher in the rural than in the urban area in El Salvador [NER: 100% and GER: 132%] and we know that EDUCO schools were the main enrolment driving force in the rural area in the 1990's). Taking this as a basis, the first study, estimating expanded education production functions which use three measures of educational achievement<sup>32</sup> and allowing the estimation of the impact of school autonomy by comparing EDUCO with traditional rural schools<sup>33</sup>, attempts to explore if this expansion came at the expense of learning. It finds that, not only educational achievement is not any lower in EDUCO than in traditional schools (which is good since students in EDUCO are usually from the most disadvantaged backgrounds), but that students in EDUCO schools miss less school days due to teacher absences than traditional school students. The second study, estimating the first and second-order effects of EDUCO schools through regression analysis and controlling for sample selection and unobservable bias when measuring the impact of EDUCO vs. traditional schools, finds that EDUCO teachers have more motivation, as measured by spending more time meeting with parents and other school members, being absent less and dedicating more time to teaching, and that this increased motivation has a positive impact on student performance.

Looking at these results, two points that come to mind is that school autonomy, at least in certain functional areas, seems to be a very promising reform, and that this reform, to be effective, should be accompanied by both a strong, well-designed "compact" relationship between the center and the schools (the supervisory system put in place in El Salvador is an example of what might be

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<sup>29</sup> See Nicaragua Reform Evaluation Team (1996), Fuller and Rivarola (1998) and King, Ozler and Rawlings (1999).

<sup>30</sup> The model, which covers almost 2,000 students in about 90 schools at the primary and secondary level in 1996, also allows for non-random selection of schools into the decentralization reform (schools, at least in the first stage of the reform, were generally either chosen by the MOE or convinced to volunteer and, as such, cannot be considered entirely random) and corrects for sample attrition.

<sup>31</sup> At the primary level, were each school to increase its real decision-making power by one standard deviation (i.e. approximately by 20% more decisions) the average math score would increase by 6.7%: this effect size is twice as large as that of textbooks, 1.5 times that of teacher's education and 1.4 times that of a one-standard-deviation reduction in class size.

<sup>32</sup> Standardized tests in Spanish and math and school-days missed by a student due to teacher absence.

<sup>33</sup> The model, which covers 192 schools and 897 students in 1996, also corrects for endogenous selection of schools by the parents.



needed), and a strong “client power” relationship. Regarding this last relationship, there is evidence that EDUCO parents’ associations visit classrooms 4-5 times more often than what parents would do in traditional schools: this most certainly explains why teacher absences are lower. In Nicaragua, the tight association between school autonomy and parent participation is also likely to be an important element in explaining why school decisions on teacher management issues are positively related to educational quality: in particular, there is evidence that parents are quite effective in helping track and monitor teacher activity.

### **Other cases**

**Other evidence suggests that school autonomy in several areas increases test scores and other educational achievement indicators and that the impact of autonomy is strengthened by the use of “client power”. It is also shown that “client power” only has an impact combined with school autonomy. Finally, school autonomy, or increased school decision-making in local decisions, can promote convergence among rich and poor schools and its impact is likely to depend on surrounding institutional characteristics.**

#### **Evidence:**

The relation between autonomy and participation at the school level is also particularly looked at in a study of Eskeland and Filmer (2002) on Argentina, where, through the estimation of an expanded education production function where the impact of school autonomy and parent participation on test scores is captured through “de-facto” measures of autonomy and participation per school<sup>34</sup>, they find a composite index of school autonomy (including decision-making autonomy in the teacher management area) to be significantly and positively related to exam scores and the marginal impact of this index to be increasing with the level of participation. The study also finds that parent participation only works on test scores through autonomy and that the impact of autonomy (as well as the enhancing effect of participation) increases for poor and public sector schools. These results suggest that: (a) school autonomy, even if limited, is effective in promoting higher quality; (b) school autonomy effectiveness increases with the level of participation, or, the strength of the “client power” relationship; (c) this “client power” relationship only becomes effective when there is school autonomy, which; and (d) school autonomy can be useful in increasing the performance of poor schools (and promote convergence with richer schools).

The complementarity between school autonomy and parent participation, and the need for more specific analysis of other determinants of the impact of school autonomy on educational performance, is illustrated in a recent study of Paes de Barros and Mendonca (1998) on Brazil. This study, using an education production function analysis which exploits the variation in space and time of educational innovations to test the impact on test scores and other educational achievement indicators (such as school repetition, out-of-school-youth and age-for-grade distortion) of three measures of school autonomy (financial autonomy, election of principals and the adoption of school councils)<sup>35</sup>, finds a generally positive and substantial impact of the three innovations on school repetition. It also finds, however, that, even if still significant, the three

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<sup>34</sup> The study, which covers 20,000 students drawn from a representative sample of private and public Argentinian schools, also attempts to address the issue of the potential endogeneity of autonomy and participation.

<sup>35</sup> The model, run on the 18 states between 1981 and 1993, takes particular care to control for variables like the quality of family environment and teachers which could be correlate with the innovative States.

innovations explain only about half of the modest variation of out of school children and age-for-grade distortion over the time-period 1981-1993, that the impact of financial autonomy and election of principals is significant but small in explaining test scores and the one of school councils not even significant. A possible explanation for this heterogeneous and often weak impact lies in the uncoordinated adoption of these innovations in the Brazil states. While a majority of the states were, for instance, transferring funds to the schools and had school councils in the early 1990's, only four of them implemented these innovations at the same time, while in the others these measures were unsynchronised, subject to reversals, etc. The results also suggest, however, that even the combination of these measures might not necessarily be successful in the same way in all states, suggesting the need for more specific analysis of the institutional characteristics of the environment in which school autonomy develops.

A recent study of Di Gropello and Marshall (2004), using regression functions to measure the first and second-order effects of PROHECO (autonomous) schools and controlling for sample selection bias, finds that school autonomy in the administrative area, in combination with higher community monitoring, translates into better capacity utilization in PROHECO schools, under the form of less school closings, more individualized learning, higher frequency of homework, etc, and that, in turn, differences in school capacity utilization explain a substantial proportion of the observed differences in academic achievement between PROHECO and control schools.

Finally, Di Gropello (2002) shows that there is a significant positive relationship between test score and the level of pedagogical decentralization of the school and that there is an improvement of municipal intra-area equity, i.e. that the relation between the socio-economic level of the municipal school and school educational achievement is weaker, when schools have a more active role in local decision-making (which would suggest that giving more responsibilities to schools ensures better resource targeting, i.e. favorable to the poor, and promotes convergence).

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